

the induction period for each drug. Overall, 63% of patients experienced a dose escalation, of which 68% occurred within the first year, excluding induction. Peak frequency of dose escalation occurred between weeks 11-30. Calculated daily, escalated dose was greater than maintenance by 9% for adalimumab, 14% for etanercept, and 28% for ustekinumab. **CONCLUSIONS:** Across all treatments, dose escalation was recorded in over 60% of patients, most often in the first year of treatment, indicating that patients may require additional doses to maintain response. These data highlight the need for new treatments which provide high sustained efficacy, with a rapid onset of action.

#### PSY69

##### EFFECT OF FLORIDA'S PRESCRIPTION MONITORING PROGRAM AND PILL-MILL LAWS ON OPIOID PRESCRIBING AND UTILIZATION

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**OBJECTIVES:** To quantify the effect of the implementation of Florida's PMP and pill mill laws on overall and high risk opioid prescribing, utilization, and dispensing. **METHODS:** We applied comparative interrupted time series analyses to IMS Health LRx LifeLink data to characterize the effect of PMP and pill mill law implementation on a closed cohort of patients, prescribers and retail pharmacies between July 2010 and Sept 2012 in Florida (intervention state) compared with Georgia (control state). We conducted numerous sensitivity analyses including varying the length of observation and modifying requirements for continuous observation of individuals throughout the study period. **RESULTS:** From July 2010 to September 2012, a cohort of 2.6 million patients, 431,890 prescribers and 2,829 pharmacies was associated with approximately 480 million prescriptions in Florida and Georgia, 8% of which were for opioids. Average total monthly opioid volume (355.1 vs. 124.2 kilograms [kg]), average dose per transaction (55.2 vs. 46.6 milligrams [mg] MEDD), and average number of days supply (18.4 vs. 16.0 days) were each higher in Florida than Georgia prior to implementation of Florida's PMP and pill mill laws. Overall, Florida's laws were associated with statistically significant declines in opioid volume (3.7 kilograms/month) and MEDD (0.46 mg/month), without any change in days supply. Reductions were limited to prescribers and patients with the highest baseline opioid prescribing and utilization, respectively. Sensitivity analyses varying the time windows and enrollment criteria supported the main results. **CONCLUSIONS:** Implementation of PMP and pill mill laws in Florida was associated with decreases in prescription opioid dispensing relative to Georgia among patients and providers with high levels of opioid utilization at baseline.

#### PSY70

##### THE CHANGING COSTS OF CARING FOR HEMOPHILIA PATIENTS IN THE U.S.: INSURERS' AND PATIENTS' PERSPECTIVES

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**OBJECTIVES:** Hemophilia is an inherited condition requiring lifelong, expensive treatment. Initiating prophylaxis treatment with factors VIII (hemophilia A) or IX (hemophilia B) at an early age has been shown to be effective in improving health outcomes. In 2007 the medical advisory council of the National Hemophilia Foundation (NHF's MASAC) recommended prophylaxis treatment as the optimal therapy for these patients. The study objectives were: (1) To explore the economic burden over the patient's lifespan; (2) To quantify changes in factor VIII/IX utilization and related costs over the past decade. **METHODS:** A retrospective, US health insurance claim database (2004-2012) analysis was conducted. Males with  $\geq 2$  pharmacy claims for a hemophilia drug within 3 months, and continuous enrollment for  $\geq 180$  days were included. Patients utilizing inhibitor treatments were excluded. Annual payer and patient out-of-pocket (OOP) expenses were calculated by service category (inpatient, outpatient, medications), and stratified by patient's age and calendar year. Costs were adjusted to 2013USD. Annual supply days (ASD) per patient were calculated; ASDs over time were compared using a t-test. **RESULTS:** For hemophilia A (N=727), increase in payers' costs was observed during the first 4 decades of life, peaking at age 34 (\$273,669) decreasing thereafter, and annual OOP staying constant at \$2,589/year. For hemophilia B (N=161), an increase in payers' costs was observed during the first 3 decades of life peaking at age 29 (\$281,981) decreasing thereafter with annual OOP at \$2,401/year. Between 2007 and 2012, ASD per patient increased significantly for both factor VIII (ADVATE®: 160.5 vs. 249.9 days,  $p=0.00029$ ) and factor IX (BENEFIX®: 132.8 vs. 214.7 days,  $p=0.0255$ ) coinciding with payers' drugs cost over the same time period. (Hemophilia A: \$186,283 to \$212,747 respectively; hemophilia B: \$147,778 to \$186,851 respectively). **CONCLUSIONS:** Over the past decade, the mean per patient consumption of factor replacement therapy has increased substantially, in line with new treatment guidelines.

#### PSY71

##### INCREASED LENGTH OF STAY FOR OBESE PATIENTS BY CHRONIC DISEASE

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**OBJECTIVES:** An obese body mass index (BMI) increases morbidities, however there are few chronic disease registries that can quantify the cost of obesity. Clalit Health Services (CHS), with complete longitudinal data of over 4 million members, provides an ideal format for comparing health care utilization between obese and non-obese patients to inform the need for improved health care policy. **METHODS:** For the years 2011-2013 inclusive, we took two random samples of 10,000 obese (BMI  $> 30$ ) patients and 10,000 normal and underweight (BMI  $\leq 25$ ) from the CHS database both according to Clalit population age standard. We then extracted their additional chronic diseases from the CHS registry. Finally, we compared the average length of stay (LOS) for inpatient admissions between the groups, by disease. **RESULTS:** Obese patients with underlying chronic disease had, on average, a 27% increased LOS compared to non-obese patients with chronic disease. The greatest effect was seen among obese patients with chronic renal failure, whose LOS was 2.7 times or nearly 20 days longer.

By disease: ischemic heart disease, 1.9 times or 10 days longer; hypertension 1.3 times or 4 days longer; congestive heart failure, 1.2 times or 3 days longer; and rheumatoid arthritis, 1.4 times or 2 days longer. Obese patients with diabetes and s/p cerebral vascular accident had a shorter LOS (0.8 times or 3 days, and 0.8 times or 4 days respectively). **CONCLUSIONS:** Obesity increases the LOS for all-cause hospital admissions among patients with various underlying chronic diseases. This may be due to insufficient diagnosis by the primary provider or specialist, inadequate medication dosing (eg, pain management), or inadequate support during an inpatient stay. A proactive health care policy is needed to guide the management of patients with chronic disease who are also obese, with the potential for cost-savings of intervention, pharmaceutical, or surgical treatment of obesity at baseline.

#### PSY72

##### THE AVAILABILITY AND EXPENDITURE OF ORPHAN MEDICINES IN POLAND

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**OBJECTIVES:** The aim of the present analysis was to identify the level of the availability and total expenditure of medicines for rare diseases with European authorization and orphan designation. In Poland all innovative medical technologies and services claiming public money founding have to be assessed by Agency for Health Technology Assessment (AOTM). Pharmacoeconomic evaluations of new therapies are required for all reimbursement decisions and orphan drug manufacturers cannot be exempted from providing a full pharmacoeconomic or HTA reports. The criteria of assessment connected with clinical and cost effectiveness (threshold is 3xGDP for ICUR/QALY) are the same for all kind of drugs. **METHODS:** All orphan designation admitted by European Medicines Agency (EMA) until the end of 2014 were reviewed and analyzed from the official website of EMA. Among 792 EMA's orphan registrations studied 78 (9.8%) applied to orphan drugs. We compared the outcomes with reimbursement list officially published by Ministry of Health. Then it was checked what was the share of orphan drugs in overall reimbursement spending. **RESULTS:** At the end of 2014 there were 28 orphan drugs available on the reimbursement list (36% of designed by EMA). The total public payer reimbursement spending was €2.41bn in 2012 and €2.26bn in 2013. Orphan drugs have only accounted for a small percentage of the overall drug budget in polish health care system (1.5% in 2012 and 3.2% in 2013). **CONCLUSIONS:** In the literature we can find opinions that the relatively low budget impact of orphan drugs is often used as an argument in reimbursement decisions. In Poland reimbursement was awarded to the minority of orphan drugs designed by EMA. Very strict requirements in order to ensure compatibility with law directives could potentially influence negative reimbursement decisions for orphan drugs.

#### PSY73

##### BIARIATRIC SURGERY IN THE BRAZILIAN HEALTH CARE SYSTEM: RESOURCES UTILIZATION

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**BACKGROUND:** Obesity is a pathology that leads to several co-morbidities such as diabetes and hypertension. In Brazil obesity rates (BMI  $> 30$ kg/m<sup>2</sup>) raised from 11.8% in 2006 to 17.5% in 2013. Bariatric Surgery is the most effective treatment to achieve excess weight lost for morbid patients. It is estimated that Brazil has around 1.8 million people with BMI  $> 40$ kg/m<sup>2</sup>, considering that Brazil has an universal health care system and 25% of the population relies in the private health care sector, several people are eligible to get bariatric surgery. **OBJECTIVES:** Evaluate the use of the resources dedicated to treat morbid obese patients in the Brazilian public health care system (SUS) from 2008 to 2013. **METHODS:** Revised data of expenditures, number of surgeries and length of stay related to bariatric surgery in the database of the IT Department of SUS (DATASUS). **RESULTS:** The number of certified hospitals that perform bariatric surgery increased by 35% and the percentage of states covered by certified hospitals rose from 60% to 74%. During the same period the number of procedures increased by 113%. Despite the increase in the number of procedures by 113%, the days of hospitalization required for surgeries increased only 52%; this is due the average length of stay reduction from 5.7 days to 4.1 days, showing a better efficiency among hospitals. The total expenditure in bariatric surgeries rose by 161%. **CONCLUSIONS:** Analysis demonstrated that the access to the bariatric procedure in Brazil has increased in the past five years. The hospitals' efficiency improved during the same period, decreasing the average length of stay. Today the Brazilian public health care system provides surgery to less than 0.75% of the eligible population and despite the access increase; more resources (physicals and infrastructure) are needed in order to treat the morbid obese population

#### PSY74

##### CANADIAN RETROSPECTIVE CLAIMS DATA ANALYSIS OF BIOLOGICS SWITCHING AND RETENTION PATTERNS IN PSORIASIS PATIENTS

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**OBJECTIVES:** To describe treatment patterns and cost in patients with PSO (psoriasis) receiving biologic therapies (BT). **METHODS:** A retrospective cohort of medication claims data from IMS Brogan Private (Canadian national) and Public (Ontario and Quebec) Drug Plan databases was analysed. Biologic-naïve PSO patients  $> 18$  years of age were selected between 01/01/2007 and 03/30/2011 and followed for 24 months to understand lines of therapy, retention on BT, and annual therapy costs. Target biologics included adalimumab, etanercept, infliximab and ustekinumab. **RESULTS:** 3,546 patients were identified. Of those, 44% initiated etanercept, 26% adalimumab, 19% ustekinumab, and 10% infliximab. 32% of patients remained on 1st line therapy, 16% switched, and 52% stopped therapy over the 24 month period. Median days on 1st line therapy was longer in public than private plans (502 vs. 357). Of those who switched, 556 received 2 lines, and 105 received 3 or more lines of BT. In a retention model of private plan patients, those who supplemented with non-biologic PSO therapies were 16% - 42% more likely to stay on BT than those tak-